



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/624,728

07/21/2003

Albert Wang

MATRIX.031A

7176

20995

7590

05/12/2006

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

ZERVIGON, RUDY

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 05/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,728	Applicant(s) WANG, ALBERT	
	Examiner Rudy Zervigon	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12 and 18-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 11, 2006 and March 13, 2006 are entered.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-12, 18-25 are directed to the same invention as that of claims 1-28 of commonly assigned USPat. US 6,273,956 B1, US 6,228,773 B1. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 3-12, 18-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. US 6,273,956 B1. Cox teaches in claim 14, the added claim 1 limitation of “..the throttle valve (45, 38, 56; Figure 15) configured to regulate the pressure”. Although the conflicting claims are not identical, they are not patentably distinct from each other because although Cox does not claim the added claim 12 limitation of “the computer configured to control the pump...”, it would have been obvious to one of ordinary skill in the art at the time the invention was made to “program” Cox’s computer as taught by Cox (claims 1, 7, 9, 10, 13). Motivation to “program” Cox’s computer is for process automation and optimization. It would be obvious to those of ordinary skill in the art to optimize the operation of the claimed invention (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); *Merck & Co. Inc. v.*

Art Unit: 1763

Biocraft Laboratories Inc. , 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied , 493 U.S. 975 (1989); In re Kulling , 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990), MPEP 2144.05).

6. Claims 1, 3-12, 18-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. US 6,228,773 B1. Cox teaches in claim 14, the added claim 1 limitation of “..the throttle valve (45, 38, 56; Figure 15) configured to regulate the pressure”. Although the conflicting claims are not identical, they are not patentably distinct from each other because although Cox does not claim the added claim 12 limitation of “the computer configured to control the pump...”, it would have been obvious to one of ordinary skill in the art at the time the invention was made to “program” Cox’s computer as taught by Cox (claims 1, 7, 9, 10, 13). Motivation to “program” Cox’s computer is for process automation and optimization. It would be obvious to those of ordinary skill in the art to optimize the operation of the claimed invention (In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); In re Hoeschele , 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); Merck & Co. Inc . v. Biocraft Laboratories Inc. , 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied , 493 U.S. 975 (1989); In re Kulling , 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990), MPEP 2144.05).

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, and 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara Yasumasa (JP08127861)¹ in view of Jansen; Frank (US 4,612,207 A). Yasumasa

¹ IDS reference of paper number 25042005. See provided machine translation from <http://www4.ipdl.ncipi.go.jp/Tokujitu/PAJdetail.ipdl?N0000=60&N0120=01&N2001=2&N3001=H08-127861>

Art Unit: 1763

teaches a photoresist ashing system (Figure 1; abstract) comprising two processing chambers (any two of 3A-C; Figure 1; abstract) configured for alternate operation and no more than a single pump (“DP”; Figure 1; abstract) in fluid communication with the two chambers (any two of 3A-C; Figure 1; abstract), the pump (“DP”; Figure 1; abstract) being configured to perform both pump (“DP”; Figure 1; abstract) down and process pumping (“DP”; Figure 1; abstract) of the two chambers (any two of 3A-C; Figure 1; abstract), as claimed by claim 1. Applicant’s claim limitations of “a photoresist ashing system”, “alternate operation”, and “being configured to perform both pump down and process pumping of the two chambers” are claim requirements of intended use. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

Yasumasa further teaches:

- i. The system (Figure 1; abstract) of claim 1, wherein the single pump (“DP”; Figure 1; abstract) is a dry pump (“DP”; Figure 1; abstract), as claimed by claim 3
- ii. The apparatus of claim 1, wherein the chambers (any two of 3A-C; Figure 1; abstract) are adjacent to each other, as claimed by claim 6
- iii. The apparatus of claim 1 wherein the processing chambers (any two of 3A-C; Figure 1; abstract) are each configured to receive a single silicon wafer at a time, and the

Art Unit: 1763

processing chambers (any two of 3A-C; Figure 1; abstract) each comprise a downstream plasma reactor, as claimed by claim 10

- iv. The apparatus of claim 1 wherein the processing chambers (any two of 3A-C; Figure 1; abstract) are each configured to receive a single silicon wafer at a time, and the processing chambers (any two of 3A-C; Figure 1; abstract) each comprise an in-chamber plasma reactor, as claimed by claim 11

Yasumasa does not teach a throttle valve (45, 38, 56; Figure 15) simultaneously downstream of Yasumasa's both chambers (any two of 3A-C; Figure 1; abstract) and upstream of Yasumasa's pump ("DP"; Figure 1; abstract). Yasumasa further does not teach

- i. The system (Figure 1; abstract) of claim 1, further comprising only one isolation valve between the pump and a first one of the chambers, as claimed by claim 4
- ii. The system (Figure 1; abstract) of claim 1, further comprising only one isolation valve between the pump and a second one of the chambers, as claimed by claim 5

Jansen teaches a wafer processing apparatus (Figure 1) including a throttle valve (45, 38, 56; Figure 15) (19; Figure 1) downstream of Jansen's chamber (15; Figure 1) and upstream of Jansen's pump (18; Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Jansen's throttle valve (45, 38, 56; Figure 15) to Yasumasa's apparatus.

Motivation to add Jansen's throttle valve (45, 38, 56; Figure 15) to Yasumasa's apparatus is for controlling processing pressure to desired values as taught by Jansen (column 5; lines 36-45).

9. Claims 12, and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox; Gerald M. (US 6,228,773 B1) in view of Khan; Anisul et al. (US 6,802,933 B2). Cox

Art Unit: 1763

teaches a dual chamber processing system (Figures 4, 6, 15; See common numbers) for continuously processing a plurality of work pieces (31,33; Figure 15) comprising: a common power source (22; column 7, line 1 – column 8, line 20) switchable (22; column 7, line 1 – column 8, line 20) between a first plasma applicator (26; Figure 15) of a first chamber (30; Figure 15; column 8; lines 25-45) and a second plasma applicator (28; Figure 15) of a second chamber (32; Figure 15; column 8; lines 25-45), the first chamber (30; Figure 15; column 8; lines 25-45) for processing a second workpiece in a vacuum to completion therein, when the power source (22; column 7, line 1 – column 8, line 20) is applied thereto and switched ON.

Applicant's claim limitations of:

“a robot (15; column 8, lines 55-65; Figure 4,6,15) configured to remove at substantially atmospheric pressure a first workpiece from the second chamber (32; Figure 15; column 8; lines 25-45) after processing the first workpieces (31,33; Figure 15) the robot (15; column 8, lines 55-65; Figure 4,6,15) configured to reload the second chamber (32; Figure 15; column 8; lines 25-45) with a third workpiece to be processed while the second workpiece is being processed in the first chamber (30; Figure 15; column 8; lines 25-45), the robot (15; column 8, lines 55-65; Figure 4,6,15) configured to remove at substantially atmospheric pressure the second workpiece from the first chamber (30; Figure 15; column 8; lines 25-45) after processing the first workpiece, the robot (15; column 8, lines 55-65; Figure 4,6,15) configured to reload the first chamber (30; Figure 15; column 8; lines 25-45) with a fourth workpiece to be processed while the third workpiece is being processed in the second chamber (32; Figure 15; column 8; lines 25-45) the second chamber (32; Figure 15; column 8; lines 25-45) for processing the third workpiece in a vacuum to completion therein when the power source (22; column 7, line 1 – column 8, line 20)

Art Unit: 1763

is applied to the second plasma applicator (28; Figure 15) and switched ON” are claim limitations of intended use of the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

Cox further teaches:

- i. exactly one pump (34; Figure 15; column 5; lines 55-67) adapted to be in fluid communication with the first and second chambers (30, 32; Figure 15), the pump (34; Figure 15; column 5; lines 55-67) being configured to perform both process pumping and pump-down pumping of both chambers
- ii. The system of Claim 12, wherein the single pump (34; Figure 15; column 5; lines 55-67) is a dry pump (34; Figure 15; column 5; lines 55-67), as claimed by claim 18
- iii. The system of Claim 12, wherein the first chamber (30; Figure 15; column 8; lines 25-45) and the second chamber (32; Figure 15; column 8; lines 25-45) are adjacent to each other, as claimed by claim 21
- iv. The system of Claim 12, wherein the power source (22; column 7, line 1 – column 8, line 20) is a microwave power source (22; column 7, line 1 – column 8, line 20), as claimed by claim

Art Unit: 1763

v. The system of Claim 12, wherein the chambers (30,32; Figure 15) are each configured to receive a single silicon wafer at a time, and the chambers (30,32; Figure 15) are each downstream of a plasma reactor (26; Figure 15), as claimed by claim 24

vi. The system of Claim 12, wherein the chambers (30,32; Figure 15) are each configured to receive a single silicon wafer at a time, and the chambers (30,32; Figure 15) each comprise an in situ plasma reactor (26; Figure 15), as claimed by claim 25

Cox does not teach

i. a computer configured to repeatedly synchronously and alternately control the power source (22; column 7, line 1 – column 8, line 20) application, the robot (15; column 8, lines 55-65; Figure 4,6,15) movement, the chamber processing, and the pump (34; Figure 15; column 5; lines 55-67), the computer configured to control the pump (34; Figure 15; column 5; lines 55-67) and the robot (15; column 8, lines 55-65; Figure 4,6,15) to effect pump-down and subsequent process pumping of one of the chambers during simultaneous venting the workpiece removal and workpiece reloading of the other of the chambers such that said pump-down pumping of one of the chambers and said venting of the other of the chambers begin at substantially the same time, and the computer being configured to open the pump (34; Figure 15; column 5; lines 55-67) to fluid communication with only one of the chambers at a time, as claimed by claim 12.

ii. The system of Claim 12, wherein the system further comprises only one isolation valve (45, 38, 56; Figure 15) between the pump (34; Figure 15; column 5; lines 55-67) and the first chamber (30; Figure 15; column 8; lines 25-45), as claimed by claim 19

Art Unit: 1763

iii. The system of Claim 19, wherein the system further comprises only one isolation valve (58, 39, 47; Figure 15) between the pump (34; Figure 15; column 5; lines 55-67) and the second chamber (32; Figure 15; column 8; lines 25-45), as claimed by claim 20

iv. The system of Claim 12, wherein the power source (22; column 7, line 1 – column 8, line 20) is a common radio frequency power source (22; column 7, line 1 – column 8, line 20) synchronously multiplexed between the two processing chambers, as claimed by claim 23

Khan teaches a computer controller (500; Figures 2B, 3B, 4, 5A) for process control of plural chambers (200, 300, 409; Figure 5A), robot (412; Figure 5A), and power (415; Figure 5A).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Khan's computer controller method for automating Cox's above process components, and for Cox to use "only one isolation valve".

Motivation to add Khan's computer controller method for automating Cox's above process components, and for Cox to use "only one isolation valve" is for process automation as taught by Khan (column 25, line 48 – column 26, line 66) and for equipment economization. It would be obvious to those of ordinary skill in the art to optimize the operation of the claimed invention (In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990), MPEP 2144.05). Further, it is established that the use of a one piece construction instead of interconnected components is obvious (In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), MPEP 2144.04).

Art Unit: 1763

10. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara Yasumasa (JP08127861)² in view of Jansen; Frank (US 4,612,207 A) and Cox; Gerald M. (US 6,228,773 B1). Yasumasa and Jansen are discussed above. Yasumasa further teaches a common radio frequency power source ("RF", Figures 1-3). Yasumasa and Jansen do not teach a remote plasma applicator. Cox teaches remote plasma applicators (26,28; Figure 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Cox's remote plasma applicators to Yasumasa and Jansen apparatus.

Motivation to add Cox's remote plasma applicators to Yasumasa and Jansen apparatus is for remote plasma processing of substrates as taught by Cox (claim 7).

Response to Arguments

11. Applicant's arguments filed April 11, 2006 and February 13, 2006 have been fully considered but they are not persuasive.

12. With respect to Applicant's arguments centered on the Examiner's sustained 102(f),(g) rejections, the Examiner cites Figure 15 in each of the USPat. US 6,273,956 B1, US 6,228,773 B1. Elements cited in each Figure 15 of the 102 references correspond directly to Applicant's invention of Figure 2A of the instant application. Specifically, Applicants state:

“

neither Cox patent discloses or claims (1) a throttle valve simultaneously downstream of two chambers and upstream of a pump, the pump being configured to perform both pump down and process pumping of the two processing chambers and the throttle valve configured to regulate the pressure in both of the chambers, as recited in Claim 1; or (2) a computer configured to

² IDS reference of paper number 25042005. See provided machine translation from

Art Unit: 1763

repeatedly synchronously and alternately control power source application, robot movement, chamber processing, and a pump, the computer configured to control the pump and the robot to effect pump down and subsequent process pumping of one of two chambers during simultaneous venting, work piece removal and work piece reloading of the other of the two chambers, such that said pump-down pumping of one of the chambers and said venting of the other of the chambers begin at substantially the same time, and the computer being configured to open the pump to fluid communication with only one of the chambers at a time, as recited in Claim 12.

“(pages 6-7 – February 13, 2006)

and...

“

..Cox does not teach or claim a single pump in fluid communication with two processing chambers and a throttle valve simultaneously downstream of both chambers and upstream of the pump.

“(pages 11-12 – February 13, 2006)

In response, the Examiner's clear anticipation of the claims is correspondingly supported:

Applying USPat. 6,228,773 for example –

“

a throttle valve (36,37; Figure 15; column 9; lines 49-60 – “the power supply, vacuum pump and throttle valve can all be shared by the dual chambers...”) simultaneously downstream of two chambers (30, 32; Figure 15) and upstream of a pump (34; Figure 15), the pump (34; Figure 15) being configured to perform both pump (34; Figure 15) down and process pumping of the two

Art Unit: 1763

processing chambers (30, 32; Figure 15) and the throttle valve (36,37; Figure 15; column 9; lines 49-60) configured to regulate the pressure in both of the chambers (30, 32; Figure 15), as recited in Claim 1; or (2) a computer (column 8, line 66 - column 9, line 11 - "near zero") configured to repeatedly synchronously and alternately control power source application, robot movement, chamber processing, and a pump (34; Figure 15), the computer (column 8, line 66 - column 9, line 11 - "near zero") configured to control the pump (34; Figure 15) and the robot to effect pump (34; Figure 15) down and subsequent process pumping of one of two chambers (30, 32; Figure 15) during simultaneous venting, work piece removal and work piece reloading of the other of the two chambers (30, 32; Figure 15), such that said pump-down pumping of one of the chambers (30, 32; Figure 15) and said venting of the other of the chambers (30, 32; Figure 15) begin at substantially the same time, and the computer (column 8, line 66 - column 9, line 11 - "near zero") being configured to open the pump (34; Figure 15) to fluid communication with only one of the chambers (30, 32; Figure 15) at a time, as recited in Claim 12.

“

13. In response to applicant's argument that there is no suggestion to combine the references of Yasamusa and Jansen (Pages 7,18), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner believes the references provide teaching, suggestion, and motivation to combine the teachings. In particular, motivation to add

Art Unit: 1763

Jansen's throttle valve (45, 38, 56; Figure 15) to Yasumasa's apparatus is for controlling processing pressure to desired values as taught by Jansen (column 5; lines 36-45). Further, with respect to Applicant's argument (Page 19) based on hindsight:

14. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

15. With regard to Applicant's claimed controller functionality and the USPat. US 6,273,956 B1, US 6,228,773 references, it is noted above that, for example, the computer (column 8, line 66 - column 9, line 11 - "near zero") of the 6,228,773 reference is operable, according to the inventors, to

“

More particularly, as best seen in FIGS. 1-13, the overall assembly 10 of the computer controlled, synchronous, multiplexed, near zero overhead, architecture for vacuum processes of the present invention is shown in a preferred embodiment that includes in its most general form a computer shown in FIG. 7, a front panel 12 (FIGS. 1,3), at least one cassette 14,16 (FIGS. 1,3,6), a robot 15 (FIGS. 4,6), a back panel 18 (FIGS. 2,7), a process gas distribution box 20 (FIGS. 2,7,8), a microwave generator 22 (FIGS. 1,2,7,9), a microwave switch 24 ((FIGS. 2,5,7,10), at

Art Unit: 1763

least one plasma source 26, 28 (FIGS. 2,5,7,11) and at least two processing chambers 30,32 (FIGS. 1,7,12), and at least one vacuum pump 34 (FIGS. 7,13).

“

Because the USPat. US 6,273,956 B1 (column 8; lines 55-67), US 6,228,773 references each teach Applicant's claimed components, including a controlling computer. The reference to “near zero overhead” (US 6,273,956 B1: column 8; lines 55-67) provides teaching that all the above computer-controlled components are managed in a desired manner to provide “near zero overhead”.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1763 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

Rudy Zervigon
5/11/6